PROPOSAL NO. 5-20

BROWN COUNTY
PUBLIC WORKS DEPARTMENT

SPECIFICATIONS FOR
THREE (3) TANDEM ONE-WAY DUMP BODIES,
HYDRAULIC SYSTEMS, & SALT SPREADER CONTROLS
(PLOW TRUCKS FULLY-EQUIPPED WITH UNDERBODY PLOWS & DUAL WINGS)

_____
Name of Company Submitting Proposal

_____
Street Address

_____
City, State & Zip

Certified/Cashier's Check or Bond #: _____

Amount of Check or Bond: $_____

Name of Bank: _____

_____
(To Be Filled In By Vendor)

SUBMIT TO:

BROWN COUNTY PUBLIC WORKS
Highway Duck Creek Office
2198 Glendale Avenue
Green Bay, WI 54303

PROPOSAL DEADLINE: FEBRUARY 6, 2020 – 2:00 p.m.

This specification shall be returned in its entirety to the Brown County Public Works Department. Instructions contained herein shall be adhered to.

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ADVERTISEMENT FOR PROPOSALS

Sealed proposals will be received by the Brown County Public Works Department at the Main Highway Shop Office at 2198 Glendale Avenue, Green Bay, Wisconsin, 54303, until **2:00 p.m., Thursday, February 6, 2020**, for the following equipment:

THREE (3) ONE-WAY DUMP BODIES, HYDRAULIC SYSTEMS,
AND SALT SPREADER CONTROLS
TO BE FURNISHED AND DELIVERED TO THE BROWN COUNTY PUBLIC
WORKS DEPARTMENT FOR INSTALLATION ON NEW
2021 TANDEM-AXLE DUMP TRUCKS

The Public Works Department reserves the right to reject any or all proposals submitted, or to accept any part or combination thereof, to waive any technicalities, and to accept any proposal deemed most advantageous to Brown County.

Proposals shall be submitted on Brown County Public Works Department forms and specifications; which may be obtained by accessing the Brown County website @ www.browncountywi.gov/Departments/Public Works/Highway/Bids & RFP's.

Any proposal submitted after the date and time specified will be rejected.

A certified check, cashier's check, or bid bond payable to the Brown County Public Works Department in the amount of not less than five percent (5%) of the quotation, shall accompany each quotation as a guarantee that if the quotation is accepted, the proposer will carry out the provisions of the proposal.

FOR: BROWN COUNTY PUBLIC WORKS DEPARTMENT

BY: PAUL A. FONTECCHIO, P.E.
Director

SPECIAL PROVISIONS

The Brown County Public Works Department will receive sealed proposals for furnishing and delivering **THREE (3) ONE-WAY DUMP BODIES, HYDRAULIC SYSTEMS, AND SALT SPREADER CONTROLS**, to be installed by Brown County on new 2021 tandem axle trucks, which are fully equipped with underbody plows and dual wings.

Proposals shall be submitted on forms provided by, and addressed to, the Brown County Public Works Department, 2198 Glendale Avenue, Green Bay, Wisconsin, 54303, and marked "Proposal #5-20 – Dump Bodies (Tandem Axles)". Proposals will be received until **2:00 p.m., Thursday, February 6, 2020**, at the Main Highway Shop Office.

These specifications are a part of the proposals and shall remain attached to same. Proposals shall be accompanied by **a certified or cashier's check** in the amount of not less than five percent (5%) of the quotation, made payable to the Brown County Public Works Department as a guarantee that the terms of the proposal will be carried out by the company submitting same. **Bid bonds** will also be acceptable.

All supplies or equipment sold to Brown County shall be sold at the risk of the contractor or seller until accepted by the Brown County Public Works Department. **Terms of Payment:** No payment will be made until after inspection and acceptance by the Highway Department or their agent.

The Public Works Department reserves the right to reject any or all proposals submitted, or to accept any part or combination thereof, to waive any technicalities, and to accept any proposal deemed most advantageous to Brown County.

Should the U.S. Government, by its action, affect or prevent a vendor from fulfillment of the terms of his proposal, he should immediately furnish proof of same in writing. Upon receiving such proof, vendor will be released from his contract, and his check or bond will be returned.

All proposals shall be firm proposals for at least 45 days from proposal opening date.

Proposals shall be on specifications as herein furnished and shall not be altered.

Checks or bonds will be returned to unsuccessful proposers upon acceptance of the successful proposal, or within 45 days of opening of proposals.

The deposit of the successful proposer will be returned to him upon performance of all conditions of the proposal, or forfeited to Brown County Public Works Department in case of failure to comply with said proposal conditions.

Brown County is exempt from Federal Excise Tax, but if there is a tax, it shall be shown in the proposal.

Proposer shall indicate full information as requested in spaces provided hereinafter.

More than one proposal may be submitted if submitted on a Brown County specification form. Separate proposals shall be used for each model proposed.

Delivery of all components contained within this proposal shall be received by Brown County within ninety (90) days (or a mutually agreed upon date) of the written bid award to the successful bidder.

MINIMUM SPECIFICATIONS

Any questions regarding this proposal and/or its contents should be directed to Fleet Manager Jim Beaupre at (920) 662-2177 or by email at jim.beaupre@browncountywi.gov.

BODY:

Shall be approximately a 14 yard box, heavy-duty model, and shall have the following:

1) Shall have smooth sides with no horizontal or vertical bracing on the sides
2) Cab protector to be a minimum of 84" wide and 30" deep and made of 10 gauge steel
3) High-tensile construction, with minimum 7-gauge AR450 sides & front, and ¼" AR450 floor
4) Capability of discharging backwards by conventional dump
5) Crossmemberless design
6) 15' 6" long & 7' wide (inside), or as close to these dimensions as possible
7) Constructed with rear corner posts
8) Sloping side body (54" front to 48" rear)
9) Fully boxed steel tube top rails and long members
10) Longsill minimum of ¼" high tensile steel (minimum 12" high)
11) ¾" re-rod walk rail step on the left rear corners
12) All welds shall be continuous – **NO SKIP WELDING**
13) Grab handles above the steps
14) No holes are to be cut into box for lighting or spreader chains
15) Shall have a factory installed 4" I.D. x 4¾" O.D. pipe through the right side and left side long member above the rear hinge
16) The body must have a third hinge installed under the rear of the box
17) Side to floor radius shall be 18"
18) Longsills shall be internal rust-proofed
19) Top rails and tailgate shall be dirt shedding

LIGHTING:

Vendor shall provide four (4) Grote 54672 stop & tail lights.

TAILGATE:

Shall be 48" high. Shall be 3.5" perimeter single panel made of 3/16" AR450 high-tensile steel with 1¼" top pins and include spreader chains. Shall have ⅜" x 2½" angle iron welded on the lower edge of the tailgate for strength. Shall have a lift loop for tailgate removal. Tailgate lock shall be air-operated (part number 29-350X8) Tectron air cylinder with the cylinder retracted when tailgate is in lock position. Pork chops shall be 1½" flame cut steel. Tailgate latch cross-shaft shall have over center mechanisms directly behind latch finger.

BOX HOIST:

Mailhot CS130-5.5-3DA trunnion-mounted hoist cylinder. Shall have a minimum two (2) year warranty on hoist. Rear hinge shall include 3rd hinge pad located in center of hinge. Pins shall be greaseable and removable. Hoist basket shall be clamp-on style with no outside frame brackets; allowing for easier installation of the scraper side plates.

HYDRAULIC PUMP & CONTROLS:

The front-mounted pump shall be furnished. Pump shall supply a minimum of 31 GPM at 1200 RPM of engine speed. Hydraulic pump shall be an axial piston pressure and flow-compensated, load-sensing type. The pump shall be cast iron construction and rated to 6.00 cubic inches per revolution at maximum stroke. The pump shall have a minimum 2" suction line and shall be rated for up to 3,000 RPM and 3,000 PSI and require only 300 PSI for stand-by pressure, and shall have 1¼" keyed drive shaft and SAE Type C mounting flange. Shall be a Model PAVC100 Parker load-sensing pump. The hydraulic filter shall be 10 micron and rated for no less than 100 GPM. The pressure side of the pump shall have a shut-off valve**. All hydraulic engineering shall be performed by Force America.**

MINIMUM SPECIFICATIONS (continued)

HYDRAULIC/FUEL TANK AND VALVE ENCLOSURE:

1. Behind-the-cab fuel/hydraulic oil/valve enclosure integrated into one assembly
2. Minimum 115-gallon fuel capacity
3. Minimum 35-gallon hydraulic oil capacity
4. Integrated valve enclosure with removable sides/rear panel with stainless T-handle latch
5. Entire system is stainless steel
6. 4-point rubber-mounted bushing to truck frame
7. Tank shall be 80" wide x 18.5" deep x 34" tall
8. RA9229-STW fuel sending unit
9. In-tank hydraulic return line filter assembly
10. Internal tank baffling for both fuel and hydraulic oil
11. Grip strut step to allow for safer filling of fuel
12. Basket type filler breather cap, mounted on the top of the tank
13. Magnetic drain plug
14. 2" NPT suction with 100 mesh screen type filter (p/n TFS2020-0-3)
15. Separate return port for control drain line
16. Sight and temperature gauge externally mounted
17. Fill pipe on tank shall be 1 ¼", 45 degree pipe elbow with pipe plug
18. Filter shall be in tank mounted Zinga model TS-1200-25-1-0 with indicator gauge
19. Suction ports for hydraulic oil at bottom of tank shall 2 ", one located close to front wall and one located close to rear wall

Required Misc. Parts:

1. 2" 1/2 –turn ball valve for suction
2. 2" x 2" barbed nipple
3. Size 32 suction elbow and clamp kit for pump
4. #16 O-ring to #16 O-ring 90 degree elbow
5. #16 O-ring female to #20 O-ring male adaptor
6. #16 O-ring male to #16 JIC male 90 degree

CONTROL VALVES:

Shall have double wings (1 right / 1 left) and underbody scraper.

Control valves shall be U.S. manufactured. Valves to be Parker MCV-ISO load-sensing, manifold-mounted, spool type, with O'ring ports.

Valve sections to be arranged in one compartment, as follows:

1. End cover: SPIN-A-VEYER 14 GPM & 7GPM, used for direct liquid application
2. Hoist: double-acting, 40 GPM
3. Plow lift: double-acting cylinder, 21 GPM
4. Plow angle: double-acting cylinder with auxiliary cross-port relief valve to protect the cylinder, 21 GPM
5. Right wing toe: double-acting cylinder, 21 GPM with holding valves
6. Right wing heel: double-acting cylinder, 21 GPM
7. Left wing toe: double-acting cylinder, 21 GPM with holding valves
8. Left wing heel: double-acting cylinder, 21 GPM
9. Sander auger: 21 GPM spool and built-in pressure compensator to operate left & right
10. Sander spinner: 5 GPM spool and built-in pressure compensator to operate left & right
11. Underbody scraper turn: double-acting cylinder with auxiliary cross-port relief valve to protect the cylinder, 21 GPM
12. Underbody raise & lower: double-acting cylinder, 21 GPM with constant down pressure and an adjustable shock relief.

MINIMUM SPECIFICATIONS (continued)

CONTROL VALVES: *(continued)*

Joystick Controls:

1. Dual Axis joystick for left wing toe and heel
2. Dual axis joystick for plow lift and angle with standby button
3. Dual axis joystick for scraper lift and angle with blast button
4. Dual axis joystick for right wing toe and heel
5. Single axis joystick for hoist with interlock

Switches needed:

1) Vibrator

CONTROL CENTER:

The Control Center must be an integral center for controlling all hydraulic functions including all automated salt controls. The unit must be supplied with separate easy to service feedback connection, speedometer connection, valve control connection, and main power connection. The center must also be supplied with color coded wiring throughout. Manuals, service literature, driver and service training must be supplied at no charge. Control Center to include the following:

Controls for all valve functions and electronic spreader control will be integrated into a single, self-contained control center. The control center shall be a padded armrest style that is ergonomically designed. Control center shall be modular in design for ease of installation and service, and wiring and connectors shall be keyed and color-coded throughout. All components must be durable for long life and trouble free operation.

The electronic controller shall be a fully proportional multi-stick controller to operate all cylinder functions. Multi-stick PWM driver electronics shall include as standard the capability to control at least 9 proportional outputs simultaneously. Controls for spreader must be located on armrest at the operator's fingertips. There shall also be four auxiliary rocker switches available with an additional fifth switch being the main power switch for the spreader control.

For ease of operation the multi-stick control shall include the following features: LED-backlit nomenclature for all joystick functions and a momentary push-button at the top of the hoist stick to provide hoist-interlock. The “Hoist” decal shall be illuminated amber while disabled, and change to green backlighting when the driver engages the hoist interlock button. The green “Hoist” LEDs shall remain illuminated while the hoist is under operation and shall time-out after a period of hoist inactivity that is selectable from 0 to 15 seconds.

The plow, wing, scraper, or other joysticks shall have the option to include a momentary pushbutton for activation of remote spreader standby, remote spreader blast, or electric joystick interlock. The multi-stick communication hardware/software shall include 4 integral float options. The use of add-on float modules is unacceptable. For flexibility of use the integral float programming shall have the following standard features:

Multi-stick control shall communicate all joystick data over the spreader control CAN bus. For ease of service and diagnostics the multi-stick control shall have the following easily accessible through the spreader control calibration menus:

- Unique MIN/MAX adjustments for each joystick function (forward, back, left and right)
- On-screen output status indicators for each PWM output
- Audible and visible output error status indicators with flashing error codes for each joystick function

MINIMUM SPECIFICATIONS (continued)

CONTROL CENTER: *(continued)*

The multi-stick control joystick outputs shall be communicated over the spreader control CAN bus to the Valve Module. Spreader control outputs and joystick control outputs shall be operated on the same Valve Module, or multiple modules as necessary.

The electronic spreader control shall be designed for precise, closed-loop control of granular and pre-wet liquid applications and operate on a CAN Bus protocol. The Central Processing Unit (CPU) shall have keyed and color coded connections to prevent incorrect installation. The unit shall have USB connectivity for file and data transfer, Ethernet connection, a J1939 communication port for connection to the vehicle bus, a second CAN bus communication port for spreader-only data use, a J1708 connection for a road and air temperature sensor, and a RS-232 connection for AVL communication. The CPU shall have on-board diagnostics, which provide real-time status of CAN bus communication, processor activity, and power status. The CPU shall have a built-in audible alarm for diagnostic purposes.

The spreader control display shall be a remotely-mounted, 10” diagonal color TFT LCD with capacitive touch and a low-profile 16:9 widescreen format and minimum of 1024X600 pixel resolution. LCD shall have variable LED backlighting. CCFL backlighting is unacceptable. The display shall include a scratch-resistant polycarbonate lens with anti-glare coating. Display unit shall have a built-in audible alarm. To avoid driver distraction, the display shall have no integrated dials or pushbuttons. Display shall communicate on the spreader control system CAN bus.

The operator menus shall be color-coded to match the encoder knobs on the operator interface. The display shall be capable of displaying the following on-screen simultaneously: Granular material name, granular material set point and actual application rate including units of measure, pre-wet liquid name, pre-wet liquid set point and actual application rate including units of measure, spread width, road temperature, air temperature, material usage total, liquid usage total, vehicle speed, and current date and time. The operator shall have the option of selecting five data items to be displayed onscreen during operation. The display will also provide four warning light indicators for low oil level, body up, oil temp, and filter bypass. These warning lights are to be functional regardless of spreader operation or status.

The display shall have integrated antennas for GPS and cellular communication. Cab mounted antennas are unacceptable. The display shall be capable of communicating wirelessly with road and air temperature sensors.

The Control Center shall be a FORCE America Patrol Commander MPJC Ultra series with a 6100 model spreader control.

SENSORS:

- Shall have auger shaft mounted F128 feedback sensor.
- Shall have wireless road and air temp sensors, provided to integrate with 6100 Controller

VIBRATOR:

Complete unit shall be a Cougar Model 3200 DC, with mounting plate and installation kit. The vibrator shall be mounted under the center of the dump body at the rear of the dog house.

PAINT & COLOR:

Body to be shot blasted and powder coated black after all components are welded on.

WELDING:

Shall be neat and workmanlike. No intermittent welding – **NO SKIP WELDING.**

MINIMUM SPECIFICATIONS (continued)

SAFETY EQUIPMENT:

- Back-up alarm
- Two (2) frame-mounted body props. Part # 1622942 and 1622943
- Body prop mounted to the truck frame with grease zerk @ the pivot point
- V notch at the top of the body to fit pocket that is welded to longsill
- Controller shall have hoist height limit with mercury switch

IN-BED LIQUID TANK SYSTEM:

- Twin 750 gallon tanks for a 1,500 gallon minimum capacity
- Stainless tubular structure to hold tanks in place (end plates that bolt to body can be carbon steel)
- Stainless center spray bar with eight (8) solid stream non-adjustable downstream nozzles and one at the end on far left shall be provided
- Manual shut off for right half of boom
- Closed loop flow meter and 70 GPM centrifugal hydraulic driven liquid pump mounted in fiberglass enclosure

UNDER TAILGATE SPREADER:

- Constructed of 201 stainless steel
- Assembly to be made of 3/16" with ¼" end plates
- All seams are 100% welded
- Full width auger located below dump body floor
- Full opening unobstructed bottom clean out
- Full opening unobstructed top lid
- Two-way auger to have 3/8" x 6" flighting with 4" pitch
- Auger supported by 1 ½" sealed relubable 2 bolt bearings.
- Auger driven by direct drive hydraulic motor
- Hydraulic interlock preventing access with auger turning
- Free swinging left and right spinners with poly spinner disc
- Hydraulic spinner motor to include seal saver poly block

EQUIPMENT OPTION(S):

1. BODY – STAINLESS STEEL:
   - Top Rails
   - Fenders
   - Corner Posts
   - Rear Bolster
   - Longsills

2. READY-TO-INSTALL BODY (on Brown County Chassis):
   Must include the following installed options:
   - Cab shield
   - Steps
   - Grab handles
   - Tailgate Spreader
   - Side Shields
   - In-bed Tanks
   - Pump System (to side of body)
   - Vibrator
   - 3rd Hinge on body
   - Pre-drilled holes for the hydraulic lines in corner posts

   The above-listed option locations shall be confirmed with Brown County's Fleet Manager Jim Beaupre prior to installation.

SPECIFICATION DATA SHEET

In the space provided hereinafter indicate full information requested. Failure to answer the questions will invalidate your quotation.

1. Make and model of proposed dump body: _____

2. Gauge type and yield strength of steel used on the body:
   (a) Sides: _____ **(b)** Floor: _____
   (c) Longsill: _____ **(d)** Tailgate: _____

3. Briefly describe frame of body of proposed model (i.e., ribs, supporting members, etc.): _____

4. Describe type, make, & model of the proposed salt spreader control systems: _____

   (b) Is this system guaranteed? ☐ Yes ☐ No If so, for how many hours of operation? _____ hours

5. Hoist:
   (a) Describe type, make, & model of the proposed hoist: _____
   (b) Is hoist basket clamp-on style? ☐ Yes ☐ No **(c)** Is the hoist a 3-stage? ☐ Yes ☐ No
   (d) How many tons can the hoist raise? _____ Tons **(e)** Give the active sleeve diameters: _____
   (f) Describe hoist warranty: _____

6. **(a)** Make & model of the hydraulic system: _____
   (b) Make & model of the pump: _____
   (c) Hydraulic tank capacity: _____ **(d)** Hydraulic pump capacity: _____
   (e) Make & model of the hydraulic filter: _____
   (f) List make & model of the control valves: _____

7. Make & model of vibrator: _____

8. Describe the tailgate locking system: _____

9. Make & model of the under tailgate spreader: _____

10. Make & model of the in-bed liquid tank system: _____

PROPOSAL NO. 5-20

QUOTATION FORM

For furnishing and delivering THREE (3) TANDEM AXLE DUMP BODY, HYDRAULIC SYSTEM, AND SALT SPREADER CONTROLS (DUAL WINGS) totally equipped as here before specified, to the Brown County Public Works Department – Highway Garage, 2198 Glendale Avenue, Green Bay, Wisconsin, 54303.

This proposal is submitted by the undersigned in accordance with the specifications, provisions, and manufacturer's printed specifications, which are attached to this proposal.

Make & model proposed:

Dump Body: _____

Hydraulic System: _____

List price per truck proposed: $ _____

Discount (per truck): $ _____

Net Price (per truck): $ _____

Total Cost (all 3 trucks): $ _____

OPTIONS:

Option 1 - Stainless Steel Body (per truck): $ _____

Option 2 - Ready-To-Install Body (per truck): $ _____

Delivery Date: _____

The undersigned submitting this proposal hereby declares and agrees to furnish the equipment as listed herein in accordance with the terms, conditions and requirements of the within and foregoing proposal and specifications.

PROPOSAL SUBMITTED BY:

Company Name: _____

Company Address: _____

_____

Phone Number: _____

Representative Name & Title *(please print or type)*: _____

Representative Signature: _____ Date: _____

Witness Signature & Title: _____ Date: _____

EQUIPMENT WARRANTY FORM

1. Make & model of proposed equipment: _____

2. Number of Units: _____

3. Length of time the warranty is in effect: _____ Days / Hours / Years

4. What part(s) on the delivered equipment **will not** be covered by such warranty: _____

_____

5. Does the warranty cover replacement parts only? ☐ Yes ☐ No

   (a) If yes, does warranty cover just the replacement of parts F.O.B. Brown County Highway Department, Green Bay, Wisconsin? ☐ Yes ☐ No

   (b) If yes, does warranty cover the replacement of the parts and all labor to make such replacement at no cost to Brown County? ☐ Yes ☐ No

   If such replacement parts and all labor necessary for making such replacement is covered in the warranty at no cost to Brown County, will such work be performed by the quoter's mechanic in Brown County Highway Shop, Green Bay, Wisconsin? ☐ Yes ☐ No

   If not, name & address in which such work will be performed: _____

   _____

6. Name and location of 24-hour parts/service: _____

_____

7. General Remarks - Pertinent to the conditions of the warranty given: _____

_____

_____

*** *Successful quoter shall furnish a warranty covering the abovementioned equipment complete as contained in this proposal and as quoted. Warranty shall cover and protect Brown County against faulty material and workmanship on any and all parts on equipment as delivered.*

THIS WARRANTY IS A SUPPLEMENT TO AND SUPERSEDES THE MANUFACTURER'S WARRANTY

SIGNED: *(Warranty shall be signed by company President or Secretary)*

Company Name: _____

Company Address: _____

_____

Representative Name & Title (please print or type): _____

Representative Signature: _____ Date: _____

Witness Signature & Title: _____ Date: _____